UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/824,844	04/02/2001	Sailaja S.K. Attili	CSCO-007/92821	1164

26392	7590	11/02/2005	EXAMINER

LAW FIRM OF NAREN THAPPETA
C/O LANDON IP, INC.
1700 DIAGONAL ROAD, SUITE 450
ALEXANDRIA, VA   22314

EXAMINER
STRANGE, AARON N

ART UNIT	PAPER NUMBER
2153	

DATE MAILED: 11/02/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

	Application No.	Applicant(s)
Office Action Summary	09/824,844	ATTILI ET AL.
	Examiner	**Art Unit**	
	Aaron Strange	2153	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *16 August 2005*.

2a)☒ This action is **FINAL**.   2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-45* is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-45* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All   b)☐ Some * c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☒ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
    Paper No(s)/Mail Date _____.

4)☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____ .

5)☐ Notice of Informal Patent Application (PTO-152)

6)☐ Other: _____.

DETAILED ACTION

Response to Amendment

1.   The declaration filed on 8/16/2005 under 37 CFR 1.131 has been considered but is ineffective to overcome the Barrett reference.

2.   It appears that applicant intends to show invention of the claimed subject matter prior to the Jan. 24, 2001 date established by US Patent Application Publication 2003/0135644, to Mark A Barrett, by showing conception of the invention prior to Jan. 24, 2001 coupled with due diligence from prior to Jan. 24, 2001 to the filing date of the present application, April 2, 2001.

I. Conception

3.   The evidence submitted is sufficient to establish a conception of the invention prior to the effective date of the Barrett reference (1/24/2001).

II. Diligence

4.   With regard to the declaration from Narendra R. Thappeta, the time period between February 1, 2001 and March 6, 2001 is not sufficiently accounted for. It appears Applicant intends to excuse this period of inactivity by stating that Mr. Thappeta was moving during that time period. While this excuse may be an acceptable one, additional details must be provided for the time period in question, including the events that took place preventing the present application from being worked on. Additional

details regarding the "other work load" referred to in the declaration could also be

beneficial. See MPEP 2138.06, especially page 2100-119 of MPEP Rev.2 May 2004

An applicant must account for the entire period during which diligence is

required. Gould v. Schawlow, 363 F.2d 908, 919, 150 USPQ 634, 643 (CCPA 1966)

(Merely stating that there were no weeks or months that the invention was not worked

on is not enough.); In re Harry, 333 F.2d 920, 923, 142 USPQ 164, 166 (CCPA 1964)

(statement that the subject matter "was diligently reduced to practice" is not a showing

but a mere pleading). A 2-day period lacking activity has been held to be fatal. In re

Mulder, 716 F.2d 1542, 1545, 219 USPQ 189, 193 (Fed. Cir. 1983) (37 CFR 1.131

issue); Fitzgerald v. Arbib, 268 F.2d 763, 766, 122 USPQ 530, 532 (CCPA 1959).

Response to Arguments

5.   Applicant's arguments filed 8/16/2005 have been fully considered but they are

not persuasive.

6.   With regard to claims 1 and 12, and Applicant's assertion that "There is no

disclosure or suggestion in Wang for intermediate nodes to send corresponding

responses back to a single receiving device" (Page 25, Lines 18-20 of Remarks), the

Examiner respectfully disagrees. Wang clearly discloses that intermediate nodes may

send corresponding responses back to the receiving device (Col 7, Lines 40-49). In the

cited section, Wang discloses that "each bridge/switch/router visited returns its own

response segment".

Claim Objections

7.   Claims 30, 31, and 33 are objected to because of the following informalities:

Claims 30,31, and 33 recite "The computer readable medium...further comprising", but

then list steps of a method. A computer readable medium cannot comprise method

steps. The Examiner recommends that the claims be amended to recite "The computer

readable medium...further comprising one or more sequences of instructions for", or a

similar recitation in order to be consistent with the language of claim 26. Appropriate

correction is required.

Claim Rejections - 35 USC § 112

8.   The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly
> claiming the subject matter which the applicant regards as his invention.

9.   Claim 2 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite

for failing to particularly point out and distinctly claim the subject matter which applicant

regards as the invention.

10.   With regard to claim 2, the limitation "further comprises" in line 3 is unclear. It

appears that Applicant intends for the locating, using and performing steps to be

additional steps of the method of claim 1. The Examiner recommends amending claim 2

to recite "The method of claim 1, further comprising:", or a similar recitation.

Claim Rejections - 35 USC § 103

11.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set
> forth in section 102 of this title, if the differences between the subject matter sought to be patented and
> the prior art are such that the subject matter as a whole would have been obvious at the time the
> invention was made to a person having ordinary skill in the art to which said subject matter pertains.
> Patentability shall not be negatived by the manner in which the invention was made.

12.   Claims 1-3, 5-19, 21-28, 30-43, and 45 are rejected under 35 U.S.C. 103(a) as

being unpatentable over Barrett (2003/0135644) in view of Wang et al. (US 6,538,997).

13.   Claims 4,20,29, and 44 rejected under 35 U.S.C. 103(a) as being unpatentable

over Barrett (2003/0135644) in view of Wang et al. (US 6,538,997) in further view of

Murhammer et al.

14.   Since the claims have not been amended, and declarations submitted by

Applicant are ineffective, the above rejections under 35 U.S.C. 103(a), presented in the

Office action of 12/28/2004, are **MAINTAINED**.

15.   Claims 1-7,9-13,17-22,26-32,39,42, and 44 are rejected under 35 U.S.C. 103(a)

as being unpatentable over Wang et al. (US 6,538,997) in view of Welcher

("Discovering Cisco Discovery Protocol").

16.   With regard to claims 1,17, and 26, Wang discloses a method of processing a

command requesting information on any intermediate layer-2 devices in a route from a

first system to a second system, said any intermediate devices being contained in a

network implemented on a broadcast medium, said network containing a plurality of

devices including said any intermediate devices, said method comprising:

receiving said command in a receiving device (Col 5, Line 31);

sending a request packet from said receiving device to a present layer-2 device

requesting information on whether said second system is connected directly to said

present layer-2 device (Col 7, Lines 61-67);

receiving by said receiving device a response packet from said present layer-2

device, wherein said response packet further identifies a subsequent layer-2 device (Col

9, Lines 46-47) in a route from said present layer-2 device to said second system if said

second system is not connected directly to said present layer-2 device, wherein said

subsequent layer-2 device is next to said present layer-2 device in said route to said

second system (Col 7, Lines 41-51); and

repeating by said receiving device said sending and receiving by using said

subsequent layer-2 device in the place of said present layer-2 device until said

response packet indicates that said second system is said present layer-2 device (Col

8, lines 14-18). However, Wang fails to specifically disclose that said response packet

indicates whether said second system is connected directly to said present layer-2

device.

Welcher discloses a protocol for discovering information about devices connected to ridges and switches (layer-2 devices). This allows an SNMP management application to learn addresses and device types of neighboring devices. This would have allowed the layer-2 devices to provide information about their neighbors without requiring them to forward a request to the neighbors during a trace, thereby reducing the network traffic required to perform a layer-2 trace.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to use the protocol taught by Welcher in Wang's system and have response packets include information about the direct neighbors of the layer-2 devices since it would have reduced the network traffic and time required to perform a trace between two devices on the network.

17.   With regard to claims 2,3,18,19,27 and 28, Wang further discloses locating a directly connected device which is connected directly to said first system; using said directly connected device as said present device, wherein said locating and said using are performed before said sending; performing said repeating to determine said route substituting said receiving device as said first device; and performing said repeating to determine said directly connected device (ripple search method) (Col 7, Lines 41-51).

18.   With regard to claims 4,20,29, and 44, Wang further discloses tracing multicast paths (Col 4, Lines 1-2).

19.   With regard to claims 5 and 30, Wang further discloses:

determining a first layer-2 device which is connected directly to said first system

logically viewing said first layer-2 device as a present layer-2 device if said second

system is not also directly connected to said first layer-2 device (Col 7, Lines 61-67);

and that said determining, sending, receiving, and repeating are performed in

said receiving device (Col 7, Lines 41-51).

20.   With regard to claims 6,31, and 42, Wang further discloses providing a command

line interface to enable a network administrator to enter said command on said receiving

device (Col 5, Lines 28-29) as an alternative to a GUI (Col 6, Lines 14-16).

21.   With regard to claims 7 and 32, Wang further discloses that said second system

is deemed to be directly connected to said first layer-2 device if said second system is

connected to a port of said first layer-2 device (Col 9, Lines 46-47).

22.   With regard to claim 9, Wang further discloses that said network is implemented

using Ethernet/802.3 protocol (Col 8, Lines 19-25).

23.   With regard to claim 10, Welcher further discloses that said request packet and

said response packet are generated consistent with UDP/IP protocol (SNMP uses

UDP) (Page 1, Line 17).

24.   With regard to claim 11, Wang further discloses that said sending, receiving, and repeating are performed in a computer system (Col 7, Lines 41-51).

25.   With regard to claims 12, 21,35 and 39, Wang discloses a method of tracing a route containing a sequence of layer-2 devices between a first system (transmitting node) and a second system (receiving node), said method being performed in a layer-2 device forming a part of a network, said method comprising:

receiving in said layer-2 device a request packet from a central device, said request packet containing an identifier for said second system, wherein said request packet requests information on whether said second system is said layer-2 device (Col 7, Lines 61-67);

determining in said layer-2 device whether said layer-2 device is said second system (Col 8, Lines 14-18);

generating in said layer-2 device a response packet, wherein said response packet indicated whether said layer-2 device is said second system (Col 8, Lines 14-18);

and sending from said layer-2 device to said central device said response packet (Col 8, Lines 14-18) irrespective of whether said central device is in said route or whether said layer-2 device is a last device in said route (each device sends a response packet) (Col 7, Lines 41-49). However, Wang fails to specifically disclose that said response packet indicates whether said second system is connected directly to said present layer-2 device.

Welcher discloses a protocol for discovering information about devices connected to ridges and switches (layer-2 devices). This allows an SNMP management application to learn addresses and device types of neighboring devices. This would have allowed the layer-2 devices to provide information about their neighbors without requiring them to forward a request to the neighbors during a trace, thereby reducing the network traffic required to perform a layer-2 trace.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to use the protocol taught by Welcher in Wang's system and have response packets include information about the direct neighbors of the layer-2 devices since it would have reduced the network traffic and time required to perform a trace between two devices on the network.

26.   With regard to claims 13, 22, and 36, Wang further discloses that said generating further comprises: identifying in said layer-2 device a next device, wherein said next device is next to said layer-2 device in a route from said first system to said second system; and including data identifying said next device in said response packet (first packet is directed to the first neighbor of the trace originator)(Col 7, Lines 61-67).

Conclusion

27.   **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time

policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE

MONTHS from the mailing date of this action. In the event a first reply is filed within

TWO MONTHS of the mailing date of this final action and the advisory action is not

mailed until after the end of the THREE-MONTH shortened statutory period, then the

shortened statutory period will expire on the date the advisory action is mailed, and any

extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

the advisory action. In no event, however, will the statutory period for reply expire later

than SIX MONTHS from the mailing date of this final action.

28.   Any inquiry concerning this communication or earlier communications from the

examiner should be directed to Aaron Strange whose telephone number is 571-272-

3959. The examiner can normally be reached on M-F 8:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Glen Burgess can be reached on 571-272-3949. The fax phone number for

the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the

Patent Application Information Retrieval (PAIR) system. Status information for

published applications may be obtained from either Private PAIR or Public PAIR.

Status information for unpublished applications is available through Private PAIR only.

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you have questions on access to the Private PAIR system, contact the Electronic

Business Center (EBC) at 866-217-9197 (toll-free).

AS
10/31/2005

GLENTON B. BURGESS
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2100